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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,818	06/25/2003	Vidhu J. Nagpal	1778A1	9488

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PPG Industries, Inc.
Law-Intellectual Property-39SW
One PPG Place
Pittsburgh, PA 15272

EXAMINER	
KOPEC, MARK T	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/602,818	NAGPAL ET AL.	
	Examiner	Art Unit	
	Mark Kopec	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-64* is/are pending in the application.

4a) Of the above claim(s) *7,8,16-21,31-35,37,39,46,47 and 55-60* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-15,22-30,36,38,40-45,48-54 and 61-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's election without traverse of Group II (polyol (allyl carbonate)) and Group 1 (oxides/mixed oxides) in the reply filed on 11/07/05 is acknowledged. Claims 7, 8, 16-21, 31-35, 37, 39, 46, 47 and 55-60 are withdrawn from consideration.

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The examiner has determined the instant claims are accorded a priority date of **06/25/03** (the filing date of the instant specification).

Applicant is advised that should claim 36 be found allowable, claim 64 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the

other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for

establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6,9-15,22-30,36,38,40-45,48-54 and 61-64 are rejected under 35 U.S.C. 103(a) as obvious over Selvig et al (5,236,978).

Selvig discloses polymerizable organic resin compositions of from about 70 to 90 weight percent of a polyol(allyl carbonate), e.g., diethylene glycol bis(allyl carbonate), and

from about 30 to 70 weight percent of aliphatic polyurethane having terminal allylic unsaturation. The polymerizable compositions have initiated pot life times of at least about 24 hours at 25.degree. C. and castings that have low yellowness (b*) values. Polymerizates prepared from such compositions may be used to prepare photochromic articles, e.g., lenses, by incorporating a photochromic substance, e.g., by thermal transfer, into the polymerizate (Abstract). The reference specifically teaches that the polymerizate should be transparent or optically clear (Col 9, lines 42-54), and also teaches the addition of 0.01 to 20 wt% photochromic pigments (Col 10, lines 50-58). The pigments include photochromic compounds encased in metal oxides (Col 9, lines 20-26). These photochromic pigments meet each of the instantly claimed limitations with respect to "nanoparticles".

Selvig differs from the instant claims in failing to specifically disclose the claimed IR range of 1.595 to 1.695. However, the examiner submits that the skilled artisan would have to utilize only routine experimentation to arrive at such values. Specifically, Selvig clearly teaches ophthalmic uses and transparent or optically clear compositions. Such are know in the art to include IR values within the claimed range. See, for example, Kumar (6,353,102) Col 14, lines 21-24: "Optically

clear polymerizates may have refractive index that may range from about 1.48 to about 1.75, e.g., from about 1.495 to about 1.66".

Claims 1-6, 9-15, 22-28, 36, 40-45, 48-54, 61, 62 and 64 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schmidt et al (5,910,522).

Schmidt discloses composite adhesive for optical and opto-electronic applications contains the following: a) transparent polymers and/or polymerizable oligomers and/or monomers suitable for use as adhesive, b) nanoscale inorganic particles, c) optionally, compounds for the surface modification of said inorganic particles, and d) optionally, a crosslinking initiator. The composite adhesive is suitable for connecting individual components of optical or opto-electronic elements and for constructing such elements (Abstract). Suitable transparent polymers include polycarbonates (Col 3, lines 48-49), and Schmidt teaches 1-50 vol% inorganic oxide nanoparticles such as metal oxides (Col 3, lines 62-64; Col 4, lines 10-15 and lines 36-58). Additionally, the reference teaches IR values of 1.3 to 1.7 (Col 4, line 64). The reference discloses the claimed materials and IR values with sufficient specificity to constitute anticipation.

The reference is anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular carbonate resin or surface-functionalizing agent, such modifications are well within the purview of the skilled artisan.

Claims 1-6, 9-15, 22-28, 36, 40-45, 48-54, 61, 62 and 64 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Arney et al (6,432,526).

Arney discloses metal oxide particles capable of being highly dispersed in organic materials to form transparent colloids and ceramers. The metal oxide particles of the present invention have surfaces attached to a dispersing aid and a degree of crystallinity of greater than 55 percent. The crystallite diameter of the metal oxide particles is greater than about 4 nanometers and less than about 20 nanometers. The present invention also relates to the colloids and ceramers prepared using these metal oxide particles and the methods associated with the preparation of the particles, colloids, and creamers (Abstract). The oxide particles are used to increase the refractive indexes of transparent organic matrixes to great than about 1.6 (Col 1, lines 10-25; Col 2, lines 50-55; Col 4,

lines 47-51). The size and amount or nanoparticles overlaps with the ranges instantly claimed (Col 8, lines 32-34; Col 9, lines 23-37). The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular carbonate resin or surface-functionalizing agent, such modifications are well within the purview of the skilled artisan.

Claims 29, 30 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arney as applied to claims 1-6, 9-15, 22-28, 36, 40-45, 48-54, 61, 62 and 64 above, and further in view of Kumar (6,353,102).

Arney is relied upon as set forth above. The reference differs from instant claims 29, 30 and 63 in failing to teach the addition of a photochromic compound to the transparent organic matrix.

Kumar discloses the addition of naptho compounds to optically clear (ophthalmic) polymerizable compositions (Abstract; examples).

The examiner submits that it would have been obvious to one of ordinary skill in the art to add a photochromic materials to

the optical transparent compositions of Arney as the addition of such is well known in the art (as evidenced by Kumar).

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

JaChisholm (US 2005/0063898) and Poknorny et al (US 2006/0008596) are not available as prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Kopec
Primary Examiner
Art Unit 1751

MK
January 22, 2006